

A Cross-Sectional Study Assessing Knowledge, Attitude, and Practice towards Breast Cancer and Breast Cancer Screening among Women**Rashmi Singh¹, Sujit Kumar²**¹Tutor, Department of Community Medicine, PMCH, Patna, Bihar, India²Tutor, Department of Physiology, NMCH, Patna, Bihar, India

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Corresponding Author: Dr. Sujit Kumar

Conflict of interest: Nil

Abstract**Aim:** The aim of the present study was to assess the knowledge, attitudes, and practices surrounding breast cancer awareness and screening among women.**Methods:** This was a descriptive, cross-sectional study, conducted in the Department of Community Medicine. 200 Eligible women were included in this study.**Results:** The mean age was (36, standard deviation (SD): 13.7) years, and the ages of more than half of them 120 (60%) are from 18-30 years. 84 (42%) of them were illiterate and 72 (36%) had primary education. Regarding their marital status, the majority of them 116 (58%) was married. Additionally, 144 (72%) were housewives. About the participants' knowledge about breast cancer, the majority of them 120 (60%) agreed that breast cancer is the most common cancer among females, and 120 (60%) said that breast cancer is a curable disease. Moreover, nipple discharge was the most commonly chosen symptom by the participants 88 (44%), and smoking was the most commonly selected risk factor for breast cancer 104 (52%). Furthermore, 104 (52%) of the participants did not know the methods of breast cancer diagnosis. The overall score of the participants' revealed that more than half of them had poor knowledge about breast cancer, poor knowledge about breast cancer was significantly associated with low educational status, however it was not associated with the occupation of the participants. In this study, it was also observed that 70% of the study participants had positive attitude toward breast cancer screening. Despite having good knowledge and attitude toward breast cancer screening, the practice levels were still seen to be very low among study participants.**Conclusion:** The majority of the respondents think about breast self-examination as an important issue but they have poor practice. Thus, we recommend more health campaigns and educational sessions in such facilities.**Keywords:** knowledge, attitude, practices, breast cancerThis is an Open Access article that uses a funding model which does not charge readers or their institutions for access and distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>) and the Budapest Open Access Initiative (<http://www.budapestopenaccessinitiative.org/read>), which permit unrestricted use, distribution, and reproduction in any medium, provided original work is properly credited.**Introduction**

Breast cancer is a life-threatening disease affecting women across the globe. [1] Breast cancer is a type of malignant tumor that starts in the cells of the breast and commonly occurs in women. [2] This abnormal cell could destroy healthy tissue and then, spread beyond its usual boundaries. [3] It is the most prevalent type of cancer among women and is the primary cause of cancer related mortality. [4] According to the WHO, 2.3 million women were diagnosed with breast cancer and 685,000 deaths were attributed to it globally in 2020. [5] Although the disease prevalence is higher in developed countries, three-quarters of the worldwide disease-associated deaths are arising from developing countries, crossing cultures and countries. [6,7] This is 13% of all new cancer cases and 25% of female cancers. Breast cancer is the fifth most prevalent cause of cancer mortality in women, following lung, liver, colorectal, and stomach cancers. Developing

nations have more breast cancer mortality than industrialized ones despite greater occurrences. [8]

The most common risk factors of breast cancer are being a woman and getting ≥ 50 years old, having dense breasts, having a family history of breast cancer, early menstruation, and late menopause, late pregnancy, being on birth control pills, race, atypical hyperplasia of the breast, and previous treatment using radiation therapy. [9,10] Lifestyle factors are obesity, lower amounts of physical activity, alcohol, and foods like high fats and low fiber diets. [10]

Women have one in eight risk of having breast cancer during their lifetime and early detection through screening is the only way to reduce morbidity and mortality. [11,12,13] Health care professionals should emphasize the importance of awareness and recognition of breast changes.¹⁴ American Cancer Society (ACS) guidelines for the

early detection of breast cancer in average-risk women consist of a combination of regular clinical breast examination (CBE), counseling to raise awareness of breast symptoms beginning at age 20 years, and annual mammography beginning at age 40 years. Women should undergo CBE every 3 years between the ages of 20 and 39 years, and annually after age 40 years

Breast self-examination (BSE) is one of the non-invasive methods of screening in which a woman looks at her breast for any abnormal findings like lumps, distortions, discharges or swellings with an intention to detect it early for early initiation of treatment and better chance of survival for breast cancer patients. [14,15] BSE is suitable and applicable than other methods for developing countries. It is safe, non-invasive and economic. [16] The awareness of breast cancer plays an important role in early detection and prevention of the disease, and the primary healthcare center is the first basic level of contact between women and families within the health system.

Therefore, our study aimed to evaluate the knowledge, attitude, and practice of breast cancer

screening methods among female patients attending primary healthcare centers.

Materials and Methods

This was a facility-based, descriptive, cross-sectional study, conducted in the Department of Community Medicine, PMCH, Patna, Bihar for one year.

Data Collection Tools

200 participants were randomly selected

The questionnaire is divided into 4 sections:

sociodemographic section, knowledge section, attitude section, and breast self-examination section.

Data Analysis

Statistical Package for Social Science 24.0 (SPSS) software was used for data entry and analysis. Categorical variables were presented as frequencies, and continuous variables as means and standard deviations.

Results

Table 1: Demographic characteristics of the study participants

	Frequency	Percentage
Age	36.00±	
Age groups		
18-30	120	60
31-40	48	24
41-50	24	12
More than 50	8	4
Educational level		
Illiterate	84	42
Primary	72	36
Secondary	20	10
University	20	10
Post-graduate	4	2
Occupation		
House wife	144	72
Employee	56	28
Marital status		
Single	44	22
Married	116	58
Divorced	24	12
Widowed	16	8

The mean age was (36, standard deviation (SD): 13.7) years, and the ages of more than half of them 120(60%) are from 18-30 years. 84 (42%) of them were illiterate and 72 (36%) had primary education.

Regarding their marital status, the majority of them 116 (58%) was married. Additionally, 144 (72%) were housewives.

Table 2: Participants knowledge about breast cancer

Questions	Frequency	Percentage
Breast cancer is the most common cancer among females?		
Yes	120	60
No	20	10
I don't know	60	30
Breast cancer is a curable disease?		
Yes	120	60
No	30	15
I don't know	50	25
Early diagnosis of breast cancer increases the chances of treatment?		
Yes	156	78
No	10	5
I don't know	34	17
Unequal breasts size after puberty is normal?		
Yes	128	64
No	52	26
I don't know	20	10
In most of the cases, breast cancer appears as non-painful lumps in the breast?		
Yes	120	60
No	20	10
I don't know	60	30
Normal breast feeding decreases the probability of acquiring breast cancer?		
Yes	96	48
No	40	20
I don't know	64	32
What are the symptoms of breast cancer?		
Axillary lymph nodes enlargement	20	10
Breast redness or change in color	20	10
Nipple discharge	48	24
Sever Weight loss	40	20
I don't know	72	36
Breast cancer can be diagnosed using:		
Tissue Biopsy	50	25
Ultra sound	52	26
Mammography	30	15
I don't know	104	52
Risk factors of breast cancer include		
Smoking	104	52
Alcohol	64	32
Ageing	56	28
Late menopause	36	18
Family History of BC	50	25
Obesity	40	20
Long term use of contraceptive	60	25

About the participants' knowledge about breast cancer, the majority of them 120 (60%) agreed that breast cancer is the most common cancer among

females, and 120 (60%) said that breast cancer is a curable disease. Moreover, nipple discharge was the most commonly chosen symptom by the participants

88 (44%), and smoking was the most commonly selected risk factor for breast cancer 104 (52%). Furthermore, 104 (52%) of the participants did not know the methods of breast cancer diagnosis. The overall score of the participants' revealed that more than half of them had poor knowledge about breast

cancer, poor knowledge about breast cancer was significantly associated with low educational status, however it was not associated with the occupation of the participants and wasn't associated with neither their marital status, nor their age.

Table 3: Depicts attitude toward breast cancer and practice of self-breast examination among women

Parameters	N%
Attitude towards screening	140 (70)
Practice of BSE	60 (30)
Practice of CBE	30 (15)
Practice of Mammography	14 (7)

In this study, it was also observed that 70% of the study participants had positive attitude toward breast cancer screening. Despite having good knowledge and attitude toward breast cancer screening, the practice levels were still seen to be very low among study participants.

Discussion

Breast cancer is the most prevalent cancer among females globally, encompassing nearly a quarter of diagnosed cases among females, since 1.15 million cases are diagnosed annually around the world. [17-19] Breast cancer is common in both developed and developing countries. Nevertheless, its rates are three times higher in developing countries. [20] Breast cancer is a leading cause of mortality among females in Africa. [21] Evidence suggests that practicing BSE depends on different factors including females' knowledge, attitude, socio-demographic and sociocultural factors. [22] Other reasons for low rates of practice have been reported including lack of time, forgetfulness, and low level of education. [23]

The mean age was (36, standard deviation (SD): 13.7) years, and the ages of more than half of them 120 (60%) are from 18-30 years. 84 (42%) of them were illiterate and 72 (36%) had primary education. Regarding their marital status, the majority of them 116 (58%) was married. Additionally, 144 (72%) were housewives. [24] About the participants' knowledge about breast cancer, the majority of them 120 (60%) agreed that breast cancer is the most common cancer among females, and 120 (60%) said that breast cancer is a curable disease. Moreover, nipple discharge was the most commonly chosen symptom by the participants 88 (44%), and smoking was the most commonly selected risk factor for breast cancer 104 (52%). However in the study by Tilaki KH et al, it was the second most commonly chosen after alcohol consumption. [25] Furthermore, the overall participants' knowledge about breast cancer in this study was poor, and it was associated with low education status. This association was also suggested in other studies. [25,26]

Furthermore, 104 (52%) of the participants did not know the methods of breast cancer diagnosis. The overall score of the participants' revealed that more than half of them had poor knowledge about breast cancer, poor knowledge about breast cancer was significantly associated with low educational status, however it was not associated with the occupation of the participants and wasn't associated with neither their marital status, nor their age. In this study, it was also observed that 70% of the study participants had positive attitude toward breast cancer screening. Despite having good knowledge and attitude toward breast cancer screening, the practice levels were still seen to be very low among study participants. The association between the level of education and level of knowledge regarding BSE was positively concluded in our findings, higher level of knowledge about the disease was associated with higher level of education, similar observation was noticed in other studies. [24,27,28]

In a study done on Kashmiri females [29] in which only 5.6% and 4% had practiced BSE and CBE, respectively. Furthermore, in a study done on Indian teachers, it was seen that only 36% had heard about BSE and this dismal awareness level was reflected in practice as none had ever practiced BSE, CBE, and mammogram. [30] Mammography is a very useful but expensive technique and for this reason difficult to adopt in a country like India as a routine public health measure. [31]

Conclusion

The majority of the respondents think about breast self-examination as an important issue but they have poor practice. Thus, we recommend more health campaigns and educational sessions in such facilities.

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